

COLORADO RIVER RECOVERY PROGRAM
FY 2001 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: CAP 25

1. Project Title:
Water Division 5 Coordinated Facilities Study

2. Principal Investigators:
Randy Seaholm
Michelle Garrison
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
Phone: (303) 866-3441

Fax: (303) 866-4474
e-mail: randy.seaholm@state.co.us
e-mail: michelle.garrison@state.co.us

3. Project Summary:

The primary purpose of the Coordinated Facilities Study is to provide information on water availability for enhanced spring peak flows in the 15-Mile Reach of the Colorado River for the benefit of endangered fish. The study is investigating alternatives capable of providing an average of 20,000 acre-feet to enhance the spring peak in the 15-Mile Reach in years with appropriate streamflow conditions. Provision of this water is an identified element of the Upper Colorado River Programmatic Biological Opinion (PBO).

The study is managed by an Executive Committee consisting of representatives from the:
Colorado Water Conservation Board
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service
Water User Community (west slope and east slope)
Environmental Community

Phase I was completed during FY 2001. It involved a preliminary investigation of numerous alternatives for expanded coordinated reservoir operations, modified Grand Valley irrigation and power operations, improved efficiencies of conveyance and distribution facilities, new storage facilities, and modified power plant operations and scheduling. At the end of the Phase I investigation, all proposed alternatives were evaluated and the infeasible alternatives were removed from further consideration in Phase II. A summary of the Phase I results is contained in the Appendix.

Phase II involved detailed investigation and modeling of the most feasible alternatives identified in Phase I.

A secondary purpose of the study is to summarize the evaluation of the same alternatives for providing flow enhancements to the 15 – Mile Reach during the late summer/early fall period.

4. Study Schedule:

Phase I modeling and final report completed September 2000.

Phase II modeling commences October 2000. Accompanying technical memoranda provided to the Executive Committee beginning December 2000.

Phase II initial modeling and draft report completed October 2001.

Completion of Phase II modeling expected by March 2002.

Phase II final report expected by June 2002.

5. Relationship to RIPRAP:

Colorado River Mainstem, I.A.5.m.(1). Water Division 5 Coordinated Facilities Study; Evaluate Options for Providing and Protecting Additional Peak Flows to the 15-Mile Reach.

6. Accomplishment of FY 2001 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

The following tasks were completed in FY 2001:

- 3 Meetings with Executive Committee
- Revision of Phase II Scope of Work
- Phase II modeling of selected alternatives from Phase I commenced. Technical memoranda describing the modeling and results of each alternative were provided to the Executive Committee.
- Draft report for Phase II was begun.

The Executive Committee will provide comments on the Phase II modeling and draft report and suggest additional modeling in early FY 2002. The modeling revisions and updated draft report will be completed and given to the Executive Committee for review. The final Phase II report and preferred alternatives for implementation by the Recovery Program should be available by June 2002.

The Phase II contract amendment was delayed several months due to contracting difficulties. Phase II work commenced in October 2000 rather than during FY 2000. Phase II will be completed in FY 2002 rather than in FY 2001 as originally planned.

A summary of the Phase I results can be found in the attached Appendix.

Initial Phase II modeling suggests:

11. Spring peak enhancement would be requested in approximately 50% of years according to the hydrologic triggers.

In all other years, conditions are too dry or too wet for peak enhancement.

In dry years, peak flow would be significantly below the minimum threshold of 12,900 cfs at Palisade and water supply would be limited, so that very little could be accomplished by small amounts of enhancement.

In wet years, peak flow would be near or above 26,000 AF and enhancement would not be recommended due to flooding concerns.

12. In the 50% of years in which spring peak enhancement is suggested, the desired additional 20,000 AF appears to be available. Investigation of the alternatives is still underway. Additional work will be performed to ensure that this 20,000 AF is in addition to all existing RIPRAP measures including Coordinated Reservoir Operations in the spring, contract water deliveries to the 15-Mile Reach from several reservoirs and increased HUP surplus releases to the 15-Mile Reach in the late summer and fall.

7. Recommendations:
Continue with Phase II.

8. Project Status:
Project is ongoing. Phase II was delayed several months due to contracting issues and will be completed in FY 2002 rather than FY 2001 as originally planned.

9. FY 2001 Budget Status:

A.	Funds Provided:	\$395,000	Total Funding, provided from FY1999 funds
B.	Funds Expended:	\$160,000	Phase I, through FY 2000
		\$130,000	Phase II, through FY 2001
C.	Difference:	\$105,000	to complete Phase II in FY 2002
D.	% of FY 2001 work completed, projected costs to complete: At the end of FY 2001 Phase I was 100% complete and Phase II was approximately 60% complete. Phase II should be completed in FY 2002 at a cost of \$105,000, bringing the total cost to \$395,000.		
E.	Recovery Program funds spent for publication charges:		\$1000

10. Status of Data Submission:
The Final Phase I report was published in September 2000.
Technical Memoranda describing the modeling and results of each alternative were provided to the Executive Committee throughout FY 2001.
The Draft Phase II report, including all technical memoranda, was submitted to the Executive Committee in October 2001.
The Final Phase II report including preferred alternatives for implementation by the Recovery Program will be available by June 2002.

All reports were provided to the Executive Committee, which includes representatives from the Recovery Program.

Additional copies are available upon request from the CWCB.

11. Signed: Randy Seaholm

Date: January 17, 2002

APPENDIX

A BRIEF SUMMARY of the Coordinated Facilities Study Phase I results:

Alternatives that will be thoroughly investigated in Phase II

- 1. Expanded Coordinated Reservoir Operations
- 18 1a. Green Mountain Reservoir Operations
- 1b. Ruedi Reservoir Operations
- 1e. Denver Water System Operations
- 1g. Reduce Constraints on Existing Coordinated Reservoir Operations
- 13. New Storage Projects Below Shoshone
 - 4m. New mainstem storage – focus on Webster Hill site
 - 4f, g, n, o. New tributary storage that requires pumping – focus on the Roan Creek site

Alternatives that will be grouped together for further investigation in Phase II:

- 1d. CBT West Slope Facilities Operations will be investigated as a component of alternative
- 5a. East Slope Power Operations and Scheduling
- 1f. Bypass Diversions to Storage will be investigated as a component of
- 1g. Reduce Constraints on Existing Coordinated Reservoir Operations
- 3d. Reanalysis of Grand Valley Water Management Project,
- 3e. Analysis of Grand Valley Irrigation Company (GVIC) Water Management,
- 5b. Shoshone Power Plant and
- 6a. Insurance Pool will be further investigated as components of alternative
- 14. Expanded Coordinated Reservoir Operations

Alternatives that will NOT be further considered:

- 15. Expanded Coordinated Reservoir Operations
 - 1c. Ruedi Reservoir Pumpback
- 16. Grand Valley-Centric Alternatives
 - 2a. Gunnison River Diversion into OMID canals

- 2b. Replace OMID Hydraulic Pumps with Electric Pumps
- 2c. Pumping into GVIC System from Colorado River below 15-Mile Reach

- 17. Efficiencies of Conveyance and Distribution Facilities
 - 3a. NCWCD
 - 3b. SECWCD
 - 3c. Municipalities
- 18. New Storage Projects
 - 4a, b, c, d, e. New Storage Projects Above Shoshone
 - 4h, i, j, l. New Storage Projects Below Shoshone (on tributaries, pumping not required)
- 19. Power Plant Operations and Scheduling
 - 5c. Grand Valley Power Plant
- 6. Other Alternatives
 - 6b. Obtain historic irrigation consumptive use credits

The evaluation criteria are listed below.

There is no strict priority order to the evaluation criteria. A fatal flaw in any of these categories resulted in the alternative being dropped from further consideration in Phase II.

Members of the Executive Committee have emphasized the top considerations as avoiding or minimizing negative impacts to existing water users, avoiding or minimizing loss of project yield or project flexibility, and equitably distributing the negative effects of the alternatives among water users. Participation in implementing any alternative would be voluntary.

- Volume of Water Available
- Ability to Enhance 7 to 10 day peak
- Frequency of Water Availability
- Carry-Over Ability
- Capital Cost
- Annual O&M Cost
- Effects on Other Project Yields
- Effects on Other Projects' Operational Flexibility/Reliability
- Water Rights Considerations
- Administration Considerations
- Legal Considerations
- Institutional Considerations
- Channel Constraints
- Permitting Issues
- Time Required to Implement

